Work Order ID 65179

January 7, 2011 9:08:14 AM

Item ID: D6009-129 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Crosstube Material 40

Start Date: 1/07/11 **Start Qty:** ~~20.00~~

Required Date: 5/02/11 **Req'd Qty:** 20.00

Reference:

Cust Item ID:

Customer:

Run Start **Stop**

Approvals: **Process Plan:** U **Date:** 11/01/07 **Tooling:** **Date:**

QC: **Date:** **SPC (Y/N):** **Date:**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D6009	Rev A								

100 0.00

PURCHASING

Purchasing

Memo 0.00

Purchasing

Issue P/O: 13245

a) Order as per Dwg D6009
b) Material: 3.500 x 0.625 wall 7075-T6/T6511 (WW-T-700/7 or ☐QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube
c) Minimum ultimate tensile strength = 77 ksi
d) Minimum tensile yield strength = 66 ksi
e) Tolerance are per ASTM B210 (see details on Dwg D6009)
f) Material certification required

CL 11/01/07 40

110 Receive & Inspect for Damage & Mat'l Certs 0.00

Packaging

Memo 0.00

Packaging

Ensure material certification is attached

11/10/6 40

Work Order ID 65179

January 7, 2011 9:08:15 AM

Item ID: D6009-129 **Accept** **Setup Start**

Revision ID: **Stop**

Item Name: Crosstube Material

Start Date: 1/07/11 **Start Qty:** 20.00 **Cust Item ID:**

Required Date: 5/02/11 **Req'd Qty:** 20.00 **Customer:**

Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00				x42			
QC	**Memo**	0.00							
Quality Control	Ensure Material certification comply to Dwg D6009								
140	Identify as per dwg & Stock Location: 46	0.00							
Packaging	**Memo**	0.00							
Packaging									
150	QC21- Final Inspection - Work Order Release	0.00							
QC	**Memo**	0.00							
Quality Control									

11-5-5 42

11/5/64

11-05-5 42

Picklist Print

January 7, 2011 9:08:13 AM

Work Order ID: 65179

Parent Item: D6009-129

Parent Item Name: Crosstube Material

Start Date: 1/07/11 **Required Date:** 5/02/11

Start Qty: 20.00 **Required Qty:** 20.00

Comments: IPP Rev:A□01.08.17□New Issue□SM IPP Rev:B remove
alodine DD 10.01.09 verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6009-129P Crosstube Material		Purchased	No			110	Each	0.0000	1	20			

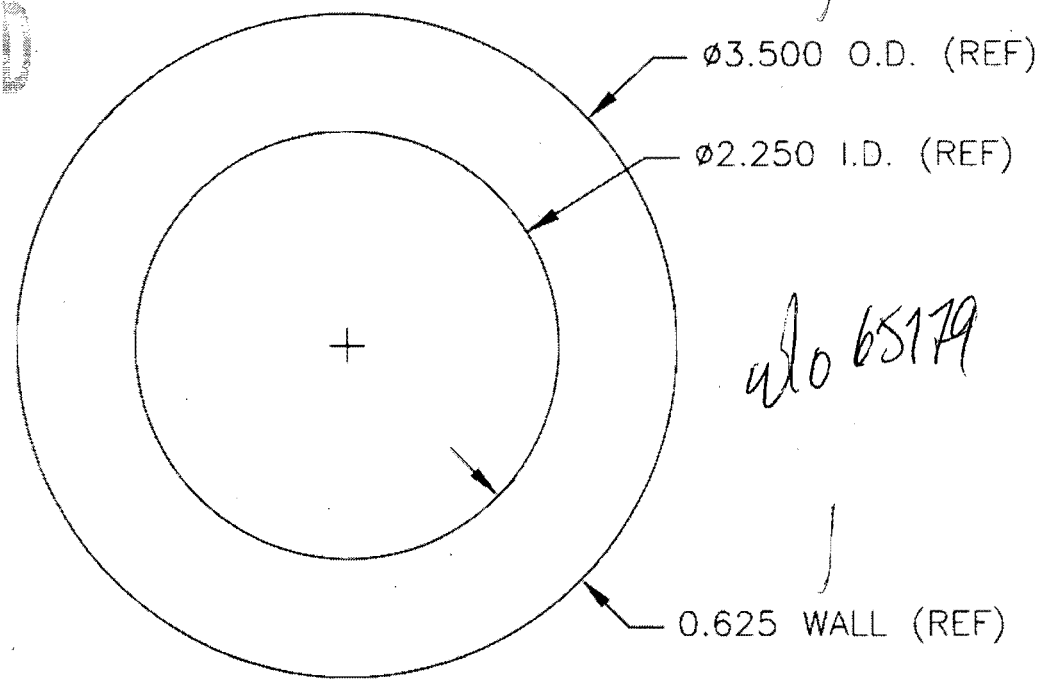
QA COPY ISSUED

DART

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D6009	REV. A SHEET 1 OF 1
DATE 01.08.16		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	01.08.16	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED



do 65179

NOTES

1) D6009-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 129" LONG TUBE: D6009-129

2) MATERIAL: 3.500 OD x 0.625 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi

3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.008 MEAN (±0.016 INCLUDING OVALITY)
WALL: ±0.020 MEAN (±0.063 INCLUDING ECCENTRICITY)
LENGTH: XXX +0.188/-0.000
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH

4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO13245

Purchase Order Date 1/7/2011
PO Print Date 4/15/2011

Order From : VU-ALU001

ALUMINIUMWERK UNNA AG
UELZENER WEG 36, 59425 UNNA
GERMANY, GERMANY

Contact Name		**Buyer**	Chantal Lavoie
Vendor Phone	303 755 5936	**Requisition Nbr**	
Vendor Fax	303 755 5672	**Tax Resale Nbr**	10127-2607
Vendor Account Nbr		**Terms**	Net 30
		Currency	USD
		FOB	Destination-Collect

REVISED QTY

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

REVISED 4/15/11

Line Nbr	Reference / Revision ID / Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req. Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6009-129P	Crosstube Material	7/15/2011 Yes	40.00 Each	Yours ppd	$1,028.0000	$41,120.00

Special Inst: AS PER DWG D6009 REV. A
B65179
MATERIAL: 7075-T6/T6511 AS PER
WW-T-700/7 OR QQ-A-225/9
OR QQ-A-200/11
SIZE: 3.500" X 0.625" WALL
SEAMLESS ALUMINUM TUBE
MINIMUM ULTIMATE TENSILE
STRENGTH = 77 KSI
MINIMUM TENSILE YIELD
STRENGTH = 66 KSI
TOLERANCE ARE PER ASTM B210

2	D6011-115P	Crosstube Material	7/15/2011 Yes	15.00 Each	Yours ppd	$1,095.0000	$16,425.00

Special Inst: AS PER DWG D6011 REV. A
B65180
MATERIAL: 7075-T6/T6511 AS PER
WW-T-700/7 OR QQ-A-225/9
OR QQ-A-200/11
SIZE: 2.750" X 0.650" WALL
SEAMLESS TUBE

AL Unna

Packinglist ALUnna AG

ALUnna ref. no.	39916/1
Customer PO.	PO. 12345
Date:	04/28/11

13240 Ce

Boxmarking:

Dart Aerospace PO 13245
Made in Germany
Dest. Hawkesbury Ont. , Canada

We hereby declare that the wooden packing material are totally free from bark and apparently free from live plant pests

										Boxdimension								
Item no.	Box no.	OD (inch)	ID (inch)	Wall (inch)	Net Weight (lbs)	Tare lbs	Gross Weight	Pieces	lengths (ft)	Lengths (inch)	Width (inch)	height (inch)	Cast. / Heat No. Top	Pcs.	Cast. / Heat No. Middle	Pcs.	Cast. / Heat No. Bottom	Pcs.
1	1	3.500	2.250	0.625	1629	228	1857	22	11	151.575	22.441	22.441			83553/400749	22		
1	2	3.500	2.250	0.625	1481	236	1717	20	11	151.575	22.441	22.441			83553/400749	20		
					3111	464	3575	42				2.502 m³						

C:\Users\lacelle\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content Outlook\KVUFZKVX\39916_1.xls

Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

Kunde: *Client:* Dart Aerospace Ltd.

1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: *Cert No.: / No. du certificat:* 521/11

Bestellnummer: *Order No. / No. de commande* PO 13245

Produkt: *Product / Produit:* Rohre nahtlos gepresst / *Tubes seamless extruded*

Auftrag: *Our Reference/Notre Reference:* 39916/1

Spezifikation: *Specification:* AMS - QQ - A - 200/11E; Spezifikation Dart Aerospace D6009

Werkstoff: *Alloy/Alliage:* 7075

Zustand: *Temper/Etat* T 6511

Abmessung *Size / Dimension* 3,500 INCH x 2,250 INCH x 0,625 INCH x 129,000 INCH
D6009-129 3.500 X 0.625 X 129

Kennzeichnung *Marking/Marquage:* ALUnna - Cert No. 521/11 - 7075 - T 6511 - Cast No. 83553 - AMS - QQA - 200/11 - 3.500" OD X 0.625" Wall - Heat Lot No. 400749 - ALUnna Order Conf. No. 39916/1-1 PO. 13245

Lieferung *Delivered Material / Matérial délivre:* pcs. 42 lbs 3111

Country of Manufacture: Germany
Products are in accordance with applicable RoHS

1. Chemische Analyse — *Chemical Analysis / analyse chimique*

Elemente ohne Grenzwerte: einzeln max. 0,05 %, insgesamt 0,15 %

		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
Charge/ Cast No.	min.			1,2		2,1	0,18	5,1						
	max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
83553		0,08	0,15	1,5	0,07	2,43	0,22	5,83	0,04	0,01	0,03			0,0001

Hydrogen content: <0,10 **ccm/100 g Al** Elements without indication < 0,01 % **country of melt manufacturer: Germany**

2. Mechanische Eigenschaften — *Mechanical Properties / Valeurs Mécaniques*

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat Lot No.
min.	77,0	66,0				
max.						
1	87,290	80,040	11,0			400749
2	87,290	79,750	11,0			
3	86,710	78,735	11,0			
4	87,145	79,895	12,0			

RMS: outside 25 - max. 15,06 µ"

11/05/05 11.05.05

Ergebnis der Prüfungen: Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results: We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats: Nous confirmons que la livraison a été controlée et correspond avec les conventions faites à la réception de la commande

KrummheuerM

Certified acc. DIN EN ISO 9001:2008 and DIN EN 9100:2003
valid until 2013-11-10
Cert.-Reg.-No.: 001959 QM08; 001959 ASH

ALUnna